IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Wary et al.	§	**ART UNIT: 1644**
	§	
FILED: March 29, 2004	§	**EXAMINER:**
	§	**Haddad, Maher M.**
SERIAL NO.: 10/812,238	§	
	§	**CONFIRMATION NO.**
FOR: Uses of Vascular Endothelial Growth	§	**3362**
Factor And Type I Collagen Inducible	§	**DOCKET: D6563**
Protein (VCIP)	§	

MS Non-Fee Amendment
Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313

RESPONSE TO RESTRICTION REQUIREMENT

Dear Sir:

In response to the Restriction Requirement in the Examiner communication mailed May 18, 2005, Applicant hereby elects with traverse Group II, claims 10-11, 16-17 and 32-33, drawn to a method of inhibiting cell-cell interaction, of treating a patient having a pathological condition and of inhibiting angiogenesis and the formation of capillaries in a patient with antibody directed against a peptide that comprises CRGDD sequence. In response to species election, Applicant elects angiogenesis in claims 14 and 20 and tumor growth in claim 21, without traverse. Furthermore, should Groups III, IV and VI be rejoined with Group II, Applicant elects SEQ ID No. 23 in claims 13, 19 and 35, SEQ ID No. 20 in claim 24 and SEQ ID No. 2 in claim 30, with traverse as elected species. Applicant submits that claims 8-9, 14-15, 20-21 are readable on the elected species

Applicant further requests that Group III, claims 12-13, 18-19 and 34-35 be rejoined with Group II, claims 10-11, 16-17 and 32-33 for examination. Group III is drawn to a method of inhibiting cell-cell interaction, of treating a patient having a pathological condition and of inhibiting angiogenesis and formation of capillaries in a patient with a peptide that comprises RGD sequence. The Examiner contends that Groups II and III are distinct because they are drawn to methods differing with respect to the ingredients, method steps and endpoints. Applicant respectfully disagrees.

Applicant submits that although the method in Group II comprises methods of inhibiting cell-cell interaction, treating a patient having pathological conditionand inhibiting angiogenesis and formation of capillaries by an antibody directed against a peptide having CRGDD sequence and the method in Group III comprises methods of inhibiting cell-cell interaction, treating a ptaient having pathological conditionand inhibiting angiogenesis and formation of capillaries by in patient with RGD sequence, the sequence of the VCIP peptide (SEQ ID No. 2) used to generate the antibody encompasses the sequence of peptide derived from VCIP (SEQ. ID Nos. 20, 23) used to block the binding of the integrins. Hence, the starting materials in Group II and Group III have a common core structure i.e. the peptides comprise a CRGDD sequence and same desired end result (i.e. inhibiting cell-cell interaction). Therefore, Group II and III are not distinct inventions. A result prior art search for invention of Group II will also encompass invention of Group III and will not, therefore, pose a undue burden on the Examiner.

Additionally, Applicant respectfully requests that Group IV, claims 22-24 and Group VI, claims 27-31 be rejoined with Group II, claims 10-11, 16-17,32-33 and with Group III, claims 12-13, 18-19, 34-35. Group IV is drawn to a peptide derived from vascular endothelial growth factor and type I collagen inducible protein (VCIP). Group VI is drawn to an antibody directed against a peptide comprising a CRGDDD sequence and a kit thereof. The Examiner contends that Groups II and VI and III and IV are related as products and process of using and the antibody in Group VI and the peptide of Group IV can be used for affinity purification in addition to recited method of inhibition. Furthermore, the Examiner states that Groups IV and VI are distinct because they are drawn to products that differ with respect to their structure and physicochemical properties. Applicant respectfully disagrees.

With regards to Group II and VI and III and IV being distinct, Applicant submits that the present invention discloses the role played by vascular endothelial growth factor and type I collagen inducible protein (VCIP) in cell-cell interaction, intracelular signaling and pathophysiological states. To this effect, the specification of the instant invention teaches that VCIP sequence comprises RGD cell attachment sequence which promotes cell-cell interactions and signaling. The specification also demonstrates *in vitro* that recombinant VCIP-RGD molecule could act as an integrin ligand and that such an interaction could be inhibited by using peptides that comprise RGD sequence or antibodies directed to the RGD sequence of VCIP (pg. 18, line 28- pg 19, line 2; Examples 11, 14, 17). Since the instant invention is directed to methods of inhibiting cell-

cell interaction, the products be it an antibody (Group VI) or a peptide (Group IV) will be useful in the methods claimed (Group II and Group III, respectively). The instant invention does not teach or suggest the use of these antibodies or peptides in affinity purification. Neither does the Examiner point out any reason or support for using these peptides in affinity purification. Accordingly, the Applicant submits that the Examiner's assertion of affinity purification is not a reasonable use. In view of the fact that Groups II and VI and III and IV are not distinct inventions, they would not require different searches. Hence, examination of the Groups II and VI and III and IV together would not present an undue burden on the Examiner.

With regards to Groups IV and VI being distinct, Applicant submits that the products of these groups are derived from the same core structure i.e. RGD sequence. For example, the peptides comprise the RGD sequence and such peptides can be used to derive the antibody. Hence, examination of Groups IV and VI together would not present an undue on the Examiner.

Additionally, with regard to species election, the Examiner contends that the peptide sequences are different and thus address different therapeutic end points. Applicant respectfully traverses this rejection. Applicant submits that although Applicant has elected SEQ ID NO. 23 in claims 13, 19 and 35, the sequence of peptide having SEQ ID No. 20 (NYRCRGDDSK) is encompassed by the peptide with SEQ ID NO. 23 (NYRCRGDDSKQVE). With regards to claim 24, Applicant also submits that the sequence of the peptide having SEQ ID No. 32 (CRGDDS) is encompassed by the peptide having SEQ ID No. 20

(NYRCRGDDSK). Additionally, with regards to claim 30, Applicant submits that the sequence of peptide having SEQ ID Nos. 20 and 32 is encompassed by the peptide with SEQ ID No. 2. Furthermore, these peptides are used to inhibit cell-cell interaction (i.e. same end point). Hence, the examination of these species together should not pose undue burden on the Examiner. Accordingly, the Applicant respectfully requests that Group III, claims 12-13, 18-19 and 34-35, Group IV, claims 22-24, Group VI, claims 27-31 be joined with Group II, claims 10-11, 16-17 and 32-33 for examination.

RESPONSE TO SEQUENCE COMPLIANCE

With regards to Applicant's failure to comply with the listing of the sequences in the application, Applicant encloses a computer readable form of the Sequence Listing and a paper copy of the same along with this response.

AMENDMENTS TO THE SPECIFICATION AND CLAIMS

Applicant has amended the specification and claims to include the sequences that were not present in the Sequence Listing.